

The “Big Bang expansion” is a limitation

Edwin Hubble found (1929) that the galaxies' spectra are generally redshifted in proportion to their distance (r). It was interpreted as Doppler-effect, then the only known alternative: a radial velocity (V), its relation $V=H \cdot r$. This hypothesis was extrapolated in absurdum by the megamyth about the Universe: a creation ex nihilo in an ever accelerating Big Bang, a perfect perpetual motion. The first Hubble constant (H) was 550 km/s per Mpc, which is re-valued to the present 50 km/s per Mpc. If spectrum is redshifted more than 100 %, ($z = \Delta\lambda_0 / \lambda_0 > 1$) the light-source could not be seen, as the speed of light can not be exceeded. But the quasars *are* visible despite $z > 1$. So, the theorists reduce their universe's radial velocity $V=c \cdot z$ by inventing the asymptotic equation above that causes the well-known paradoxes and controversies about Universe's 'age' and the H -constant's value. But as Hubble said (1937):

“If the recession factor is dropped, if redshift are not primarily velocity shifts, the picture is simple and plausible. There is no evidence of expansion and no restriction of time-scale, no trace of spatial curvature and no limitations of spatial dimension.”

The Quasars are supernatural mysteries (until) today

From now it is possible to understand and explain the strange quasars' apparently violent nature that seems to emit light of extreme intensity and energy-eruptions. These light pulses can explain as Fresnel's refracted rays, intensified and superpositioned by interference, and fluctuating by our movement. This entropy-law reveals the mechanism behind radiation's irreversible wave-elongation of thermo- and electro-dynamics. We know by experience, and easy understand, how different energy-levels strive to equalization. It explains why energy of higher level of electro- and thermodynamic radiation, forces radiation to fall towards lower levels, which implies in the last end, that the heat-death equilibrium is in the space at the supra leading resistance-less temperature around 2.7° K.

Let me quote the web site (June 2000) (www.astro.psu.edu/users/dps/surveys.html) about “*Surveys for High Redshift Quasars*” by Maartin Smith (Caltech) and James Gunn (Princeton University) that shows the non sense consensus about the quasars' nature.

“Quasars are the most luminous known object; they emit between 10 and 1000 times the energy of our entire galaxy. What is more amazing than their prodigious energy output is the size of the source; variability studies have shown that a large fraction of this energy is being generated in a volume not much bigger than the solar system.”* [* See explanation below.]

“The standard model for the energy source of quasars is accretion of matter onto a large (about 100 million solar mass) black hole. As material spirals down the gravitational potential, the matter is tidally disrupted and forms an ‘accretion disk’ around the black hole. A steady diet about one sun per year is required to support a typical quasars luminosity.”

Inconsequences about the Quasars

The web sight (June 2000) (www.sdss.org/news/releases/20000413.qso.q.html) describes “*The Sloan Digital Sky Survey Finds Most Distant Object Ever Observed*” that is the latest discovery of the 6.82 quasar where its Lyman alpha line of hydrogen is redshifted 7084 Ångström ($1\text{Å}=10^{-10}\text{ m}$) from the ultraviolet 1216 Å to the infrared 8300 Å – i.e. 682 %. The redshift of the spectral lines is interpreted by the standard model as a Doppler effect: that the expansion-velocity of the space causes the shift of the frequencies. The creationists agree that the spectacular Big Bang Birth cosmology is a selfcontradicted ad hoc-hypothesis. Survey's spokesman, Dr. Michael Turner of the University of Chicago and the Department of Energy's Fermilab understands that this interpretation must be wrong; that their “quantum-fluctuation-inflation-expansion-faster-than-light-model” is both inconsistent and unintelligible.

“Because of the expansion of the Universe, light from the distant galaxies is shifted to the red (longer waves). The factor by which spectral features have their wavelengths increased is denoted as one plus the redshift, z (received wavelength of light) = (emitted wavelength) $\times (1+z)$. This redshift phenomenon is inaccurately described as Doppler shift, for which the redshift z would be calculated as the speed of the object divided by the speed of light ($z=v/c$). It is more properly explained as the stretching of the wavelength of light as the light travels through the expanding Universe. Note that the Doppler interpretation completely breaks down for redshifts greater than one, and there are plenty of objects with redshifts greater than one.”

The quasars' mysteries are solved

This entropy theory explains how the radiation we receive once was emitted as shorter wavelengths of much higher energy-levels. But, with Wien's displacement law and Stefan-Boltzmann's heat radiation law we now can analyze the quasars emitted energies.

Wien's displacement law and very verified formula $T = k / \lambda_{max}$; ($k = 2.898 \cdot 10^{-3} \text{ m} \cdot \text{°K}$), shows how specific wavelengths relate to their specific peak temperatures. Let us now combine Wien's formula for wavelength displacement and temperature radiation with Stefan-Boltzmann's formula for heat radiation, $P = \sigma \cdot T^4$; ($\sigma = 5.7 \cdot 10^{-8} \text{ W/m}^2 \cdot \text{°K}^4$), which show how the emitted energy is proportional to the fourth power of the temperature. Since we now have found the integrating formula that is based on a new general law of nature behind the entropy wave-elongation dynamics $\Delta\lambda = h_{e\pi} \cdot s$, we can correlate the radiation's all parameters such as: wavelength, temperature and energy, so we can compute the emitted energies of the quasars and compare with the energy of the received radiation. So, by this combined energy-formula $P = \sigma \cdot (k / \lambda_{max})^4$ all the mysteries of the strange quasars are revealed.

The 6.82 quasar is a great example that there is often a simple solution to a physical anomaly even if it seems to be a complex mystery, such as the quasars' enormous radiation of energy, their strange colours that change with their increasing distances in the colossal cosmos. By real facts and right formulas it is now possible to calculate and understand the reality behind the quasars. The energy/redshift ratio that astronomers estimate by the light's intensity, corresponds with the energy at the level of the 1216 Å:s spectral line, computed and compared with the same spectrallines that have redshifted and decreased energy as observed at 8300 Å.

At 1216 Å, the ‘quasar's’ emitted radiation-energy is: $P_0 = \sigma \cdot (k / \lambda_{max})^4 = 5.7 \cdot 10^{-8} \cdot (2.9 \cdot 10^{-3} / 1.2 \cdot 10^{-7})^4 \approx 1.8 \cdot 10^{10} = \text{J/s} \cdot \text{m}^2$

At 8300 Å, entropy shift has decreased its energy to: $P = \sigma \cdot (k / \lambda_{max})^4 = 5.7 \cdot 10^{-8} \cdot (2.9 \cdot 10^{-3} / 8.3 \cdot 10^{-7})^4 \approx 8.5 \cdot 10^6 = \text{J/s} \cdot \text{m}^2$

* Explanation: $\frac{P_0}{P} = \frac{1.8 \cdot 10^{10}}{8.5 \cdot 10^6} \approx 2.1 \cdot 10^3$ the 6.82 “quasar” (415 billion light years far) emits **2100 times** more energy than we receive.

The redshift, $\Delta\lambda$, is the fractional increase of the wavelength, and the change of its energy difference, ΔP , is proportional to the fourth power of its increased scale factor $\Delta P = (1 + (\lambda - \lambda_0) / \lambda_0)^4$. By this algorithm $\Delta P = z^4$ it is easy to reckon the energy shift of the quasars: So a galaxy redshifted to **$z=10$, emits 10000 times** more energy than we receive. This is the simple principle behind the “quasars' giant energy-radiation”. This is the true and intelligible definition that doesn't need ad hoc trick like the “black holes”.

The Quasars' colours

Optical observations show that the galaxies change colour with the distance. As larger the distance is, as higher is the redshift that is codified by the symbol z . In the 60:s, the first quasars were found with higher redshift than normal and their light was quite white. And more redshifted objects were found, at $0,1 < z < 1$, that appear as the famous “*faint blue galaxies*”, and at $z \approx 1$ “*the red ones appear in place*”. At $z \gg 1$ the galaxies are bright red, which the astronomer and astrophysicist interpret by the standard model as “*very young quasars*”. But their model is self-contradicted when they explain that the quasars' colour is depending on how young the quasars were when “*the quasars were born in or after the Big Bang*”. Then should the most distant objects, that they believe are the youngest in the universe, *be blue* that is the colour of higher temperature and higher energy in their Big Bang. But light from the most distant objects, with the largest redshift (believed as the youngest quasars) are bright *red* that indicates lower energy and lower temperature than blue. The explanation to the change of quasars' colours with their increasing distance from white over blue to red, is that the Planck-curve's peak follows the entropy displaced redshift, that changes the energy-distribution and the gradient's angle.

The relative velocity of light

The increasing speed of the EM-waves doesn't contradict that the speed of light is constant. The light is the specific oscillations per time units (wave impulses) in the eye's retina. It means that the observer's own velocity effects the frequencies of his light-spectrum and thereby the spectral-lines colour – this is the *receiver's doppler-shift*. Even the source's velocity change the frequencies – that is the source's Doppler-shift. It means that the frequencies are depending both on the source's and the observer's relative speed to the light-bearing medium. As a thought-example: if an observer is travelling at half the speed of light in direction to a light-source, the EM-waves length's are shifted proportionally into the eyes' sensibility-spectrum, i.e. the observer's light-wave-lengths are doubled. *Light is a physiological reaction on oscillating electromagnetic wave impulses of energy within the eye's frequency-spectrum: as a stroboscope analogy.* So, to observers at different speeds, the light's wave-lengths are depending on their different speeds related to the light's speed. Thus, length contraction and time dilation are false. Michelson found that the Earth's movement does not influence the light's velocity. The reason is that light is not 'impetus corpuscles' or energy particles (photons) but EM wave impulses within light-spectrum's frequencies that by falling potential level propagates in the earth's magnet field, in wave-lengths related velocities.

All EM-waves' velocities are faster than light

$$a = \frac{dv}{dt} = \frac{c \cdot (1 + h_{\epsilon\pi}) - c}{t} = \frac{c \cdot h_{\epsilon\pi}}{t} \approx 1.986 \cdot 10^{-28} \text{ km/s}^2 \quad \left[\text{EM waves' elongation } \Delta\lambda = 1 \text{ \AA} \text{ per 16 million light years imply increase of their velocities by } c + \sqrt{2as}, \text{ to } c + \sqrt{6 \cdot 10^{-8}} \text{ km/s per } 1 \text{ \AA} : s \text{ redshift} \right]$$

EM waves exceed the light speed, proportional to their displacement. A blue 3900 Å:s wavelength's speed is $c + 1.53 \cdot 10^{-2} \text{ km/s}$, and a 7800 Å red wave, increases to $c + 2.16 \cdot 10^{-2} \text{ km/s}$. This entropy $s = \Delta\lambda / h_{\epsilon\pi}$ formula is an exact instrument to compute distances (s) to the very distant quasars by relating the radiation's redshifts ($\Delta\lambda$) to the entropy constant ($h_{\epsilon\pi}$). This entropy-theory shows that the galaxies spectral lines are elongated 1 Å per 16 millions light years. Consequently, the present distance to the visible horizon of the (Olber's) Universe is beyond 415 billion light years, as now at $z = 6.83$. The Big Bang creationists' geocentric Universe varies in age and size, with their belief, now it is about 12–18 billion light years. But right distance is 60.8 billion light years per $z = 1$ (=100 %).

The quantum conjecture is a misinterpretation

The quantum concept is from 1905, when the *editor* Max Planck of *Annalen der Physik* let publish Albert Einstein's hypothesis on the h -constant: that “*energy of light is structured as quanta*”. This postulate gave the *researcher* Max Planck the misleading idea about the interpretation of his strange formula – $E = h \cdot \nu$ – which he earlier (14 Dec. 1900) of priority reason had made public in a talk to the German Physical Society. Planck could not explain the formula's physical meaning, when his colleagues questioned him, but he “*had an idea that the formula hid a new principle*”. Planck “*searched desperate a classical interpretation, at any price*”. The colleagues saw his desperation as “*something bordering on a tragedy*”. Planck derived his famous formula by interpolating the heat radiation relation at different temperature and wavelength, but found that the change appeared as discontinual. As Planck searched the heat effect ($P = W/s$), he transformed to frequencies (n/s) the measurement of the wavelength-differences of $6.63 \cdot 10^{-34}$. Maybe: $[E = J/\lambda \Rightarrow E = J/n/s \Rightarrow n \cdot h = J \cdot s$ (where E is action and $h = 6.63 \cdot 10^{-34} \text{ Js}$)]. But, by mistake he inverted the measured wave-lengths to frequencies, and interpreted the continuously extended wave-units as *if energy is changing constantly with the wave-frequencies*.

The energy-anomalies of quasars and the quanta are illusions

The entropy constant $6.63 \cdot 10^{-34}$ that I codified as $h_{\epsilon\pi}$ is dimension-less and specifies the ratio of wavelengths' continual increasing. Wien's displacement law shows how the wavelength is inverse proportional to the temperature; and, united with Stefan-Boltzmann's heat radiation law we get a continual and exponential classical entropy formula to which the quantum interpretation's discontinual and linear frequency-spectrum is incommensurable. An interesting computing result is that the true amount of energy, that now is misinterpreted as energy-quantum, is by $[m_e = (h_{\epsilon\pi} \lambda)^{-4} \cdot d\lambda \cdot k^4 \cdot \sigma]$ at e.g. $4000 \text{ \AA} \approx 2 \cdot 10^{-28} \text{ W/m}^2$ and at $8000 \text{ \AA} \approx 3 \cdot 10^{-30} \text{ W/m}^2$.

The quasars' **enormous(ly) illusory bipolar radio lobes**, that is hypothetically interpreted as synchrotron-radiating jets, is easy explained by this entropy theory. When a picture of a galaxy's (or a quasar's) **radio** spectrum is compared with a picture of the same galaxy's **visible** spectrum, both pictures have been enlarged proportionally to the galaxy's redshift, depending on the dilation of the electromagnetic wave-field. As radio-waves are million times longer than light-waves, and both are enlarged by the same redshift-factor, all waves are symmetrically enlarged, and following the waves back to the source, all coincide in their emitted wave-lengths.

This intelligible radiation entropy formula $s = \Delta\lambda / h_{\epsilon\pi}$ discloses that Pound-Rebka's formula $[\Delta(?) = g \cdot l / c^2]$ has no meaning. It is a misinterpretation of their Mössbauer-experiment where P & R and “Consensus-corp.” *believes show* that the gamma-rays' redshift proves that light is a matter of gravitation-dependent energy-bullets that should verify the general relativity theory. P & R:s formula doesn't even show that gravitation is inverse proportional to the square of the distance. Moreover, P & R:s formula redshifts the light 100 % ($z = 1$) at but 1 light year, 15 billion times away from their ‘big bang’ canon. This *entropy formula* falsifies P & R:s conjecture about gravitation-dependent γ -rays, and it tells us the right amount of frequency shift of the radio signals from the satellite's altitude. This *unifying theory* is a re-evolution, to the real physics: authentic pedagogical logic will replace the autistic demagogical rhetoric.